



STATE OF MONTANA
DEPARTMENT OF ADMINISTRATION
INFORMATION TECHNOLOGY SERVICES DIVISION



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*Montana Fish,
Wildlife & Parks*

Agency IT Plan

FOR FY2010 - FY2015 IT PLAN UPDATE

S T A T E O F M O N T A N A

Should you have any questions or comments regarding this template, or desire additional copies, please contact:

Warren Dupuis
CIO Support Officer
Telephone: 406-444-0415
E-mail: wdupuis@mt.gov
Website: <http://www.mt.gov/itsd/stratplan/statewideplan.asp>

INFORMATION TECHNOLOGY SERVICES DIVISION

Dick Clark, CIO
Warren Dupuis, CIO Support Officer

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EXECUTIVE SUMMARY

In 2009, Montana Fish, Wildlife and Parks (FWP) underwent a fairly substantial reorganization. The majority of Technology Services (formerly called Information Services) was left intact within the reorganization although the manner in which service requests are managed and prioritized had to change as the result of the reorganization. A new governance structure was created, with new decision makers being appointed, so a great deal of educational efforts were begun and can be expected to continue through this biennium. The Technology Services Bureau (TSB) continues to have employees headquartered in Helena, with support technicians located in all seven of the regional offices across the state.

TSB continued previous efforts to identify and engage program staff as “system champions” for each software application, creating a responsible focal point within that program to establish better programmatic ownership as well as serving as a liaison between the program’s system users and technical staff.

As with previous years, in addition to teams working through the challenges of learning how to work more cooperatively, TSB has struggled to keep up with the agency’s appetite for information, and automation of previously manual or paper based processes, or other new programs and projects. Naturally, the ever-expanding technology industry also added to complexity and workload for TSB staff. FWP’s website continues to expand as increased e-government services are expected by FWP’s programs and public. GIS in state government continues to be a growing program with FWP’s efforts seeing little to no reductions. Security and continuity of government and operations continue to remain near the top of the list of priorities. Competing for experienced and qualified staff continues to be difficult. These issues all pose challenge to technology resources within an agency where funding is limited to special revenue with no ability to raise prices to meet growing technology budget needs.

As this strategic plan is put into place, there continues to be tremendous expectation for change, and it can be anticipated that this will be a work in progress for some time into the future. The primary intent of this strategic plan is to continue to establish the framework to allow a centralized approach to technology to guide FWP into the future.

Within this strategic plan FWP stated goals include:

1. Communication and participation in collaborative efforts.
2. Effective data and information services.
3. Stable, secure and recoverable information systems.
4. IT workforce recruitment, development, and retention.
5. Development and implementation of standardized technology practices and procedures.

Initiatives being considered for the future include:

1. Maintaining existing full time positions.
2. Achieving agency-wide understanding and commitment to maximize use of Video conferencing capabilities at FWP offices around the state to provide energy and cost savings associated with less travel by field staff for Commission and other necessary meetings.
3. Enhanced Law Enforcement technology, providing for collaborative efforts across all jurisdictional boundaries and deploying durable, state of the art technology to the field.
4. Replacement of Automated Licensing System printers at appropriate private business locations around the state to ensure continuity of operations.

As the current biennium comes to a close and the next biennium starts, especially given the rapid pace of technology and the many influences on FWP business areas, it is anticipated that new initiatives may be identified. Some may meet the criteria for reporting and some likely won't. For that reason, TSB anticipates further revision to this strategic plan as necessary, and as FWP business continues to take advantage of the efficiencies that technology can provide. As always, special focus will be on methods to increase productivity and/or increase services to customers.

SECTION 1: AGENCY CONTACT INFORMATION

Agency Name:

Montana Fish, Wildlife & Parks (FWP)

Role: Plan Owner

Name: Barney Benkelman
Telephone Number: 444-4558
Email Address: bbenkelman@mt.gov

Role: IT Contact

Name: Julie Van Winkle
Telephone Number: 444-3350
Email Address: jvanwinkle@mt.gov

Role: IT Contact (Alternate)

Name:
Telephone Number:
Email Address:

SECTION 2: AGENCY IT MISSION

2.1 Agency IT Mission Statement

Provide timely and accurate technological services to our customers through secure systems, consistent standards, innovative solutions and skilled staff to allow for sound fiscal choices and fulfillment of FWP's mission.

SECTION 3: AGENCY SECURITY PROGRAM

3.1 Security Program

FWP relies on guidance and assistance from ITSD for best practice information, and also implements all enterprise policies dealing with security. The FWP data security program focuses on several areas. First, physical security for the agency's core data infrastructure continues to be a major consideration. Ensuring access is restricted to appropriate personnel in these sensitive areas is an ongoing challenge. Secondly, electronic security for agency data is accomplished through numerous logical processes and checks. Encryption technologies are utilized where appropriate to safeguard sensitive data communications and to protect sensitive data at rest in storage. Over the past bi-ennium, FWP has implemented a number of audit procedures to safeguard data integrity on core systems and additional measures are planned for the upcoming two-year cycle.

FWP is in the process of creating an entirely new security program based on industry best practices, ITSD and agency advice and assistance, along with adoption and implementation of [National Institute of Standards and Technology \(NIST\) publish guidelines](#) and [Federal Information Processing Standards \(FIPS\)](#) to secure information systems by managing the risks to those systems. As the program's development progresses, FWP's specific measures and strategies to fully implement these guidelines and ensure our core goals of Data Protection, Individual Privacy Protection, and robust Disaster Planning, will be in the program's guiding document.

SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES

4.1 Goals

Goal Number 1:

ITG 1 Communicate and participate in collaborative efforts with stakeholders

Description: FWP Technology Services Bureau (TSB) staff will communicate and collaborate with stakeholders, and other agencies, to provide effective training, user documentation, service information, and other types of technical efforts to achieve cooperative and effective solutions.

Benefits:

- More comprehensive solutions
- Better informed and trained stakeholders
- Effective use of technology services, especially when coordinating across the state enterprise
- Clearer understanding of user needs and requirements
- Clearer understanding of technology and its applications and limitations, and why IT policies make sense to the organization
- Cost reductions in associated and appropriate areas
- Ability to take advantage of enterprise, regional or national successes

Which state strategic goal(s) and/or objective(s) does your goal address?

This goal will help to more effectively address all state strategic goals 1, 2, 3 and 4.

Update: Starting in September 2010, FWP Application Development staff adopted use of the Scrum framework for application development. Scrum allows for close stakeholder synergy through the “product owner” role. The process allows for an “inspect and adapt” approach to development. This has proven effective toward realizing many of the benefits outlined in this section.

Supporting Objective/Action

ITO 1-1 Provide the necessary training and technical support to FWP staff to provide confidence and satisfaction, thus increasing use of FWP’s new video conferencing solution.

Business requirements or business problem driving this objective.

With budgetary constraints and possibly hazardous travel conditions, video conferencing is a mechanism that can provide travel savings, increase participation at appropriate FWP meetings, and provide safer circumstances for employees or customers with a need to participate in specific FWP meetings. Employees must have confidence in the video system, and its scheduling and use to most effectively utilize the technology.

Benefits of meeting this objective:

- Cost reductions for travel, that might then be redirected to other high priority projects
- More effective system use, and confidence in video as an alternative to face-to-face
- Reduced travel related incidents
- More effective communications on FWP projects

Risks associated with this objective include:

- Poor network service resulting in poor video quality and thus ineffective meetings
- Staff resistance because of traditional mental paradigms about needing face-to-face meetings, and

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preference to get out of the office at times.

The timeframe for completion of this objective include:

- Completion of documentation of processes for scheduling and use, and training of same by the end of FY10.
- Ongoing over time as new employees are hired or existing/associated positions are filled.

Critical success factors and measures will include:

- Measureable travel cost reductions.
- Reduced travel related incidents.
- Increasing use of FWP's video conferencing solutions.
- Staff time attributable to travel is reduced, allowing additional focus on program implementation.

Update: FWP Application Development staff used Bomgar frequently to demonstrate development prototypes and to provide application training throughout the past year. Specific occasions included FWIS prototyping for lab staff in R3, application support for Block Management system users, new Hunter Ed system functionality prototyping for CommEd staff, and S&I application and Drug Tracking application training for regional wildlife staff.

Additionally, staff used the video conferencing to perform Regulations system training for regional Wildlife staff, and also used the video conferencing equipment to provide a "first look" at the wildlife Survey and Inventory application to wildlife biologists located throughout the state.

Update: FWP Network Services staff have completed upgrading all Video Conferencing site circuits to the standard 3mg MPLS type with QOS enabled. These upgrades coupled with streamlined instructions and additional training, have resulted in a significant increase in the use of the video conferencing equipment thereby realizing additional savings for the department.

ITO 1-2 Establish "system champions" for each FWP business information application/system. Train system champions ("train the trainer") to provide the necessary training and first level support for other staff within the affected program unit.

Business requirements or business problem driving this objective.

Accomplishment of this objective will transition responsibility and ownership for use of a system into the hands of appropriate business system champions. System champions will become the first point-of-contact for questions or issues end-users may have, and will serve as a liaison between the program and TSB application development staff to work through technical issues. Given the number of applications/systems TSB staff support and maintains, this objective will ultimately provide TSB staff more time to focus on technical priorities, and less time spent assisting end-users with program-related questions or issues.

Benefits of meeting this objective:

- Adequately trained system champions
- Reduced first level support calls to technical staff
- Increased employee productivity
- Increased ownership and buy-in from the end-user community

Risks associated with this objective are:

- Failure to meet this objective could result in ineffective support and system use.

The timeframe for completion of this objective is:

- Ongoing

Critical success factors and measures will include:

- System champions are assigned early in a project's ideation phase by program management.

- Higher number of knowledgeable users and more effective use of software applications.
- Technical staff's time focused on first-level support is reduced, allowing expansion of technological services and new requests.
- Support materials (e.g., user manuals) are compiled by system champions and in use for all software applications.

Update: System champions are identified at the onset of each new business information system project. List of champions identified by system/application; new applications have resulted in the identification of new system champions (now called "product owners"). List includes Drug application (Jennifer Ramsey), Wildlife Survey & Inventory (Quentin Kujala), Wildlife Harvest Query Tool (Justin Gude), Wildlife Lab Health (Neil Anderson), Wildlife Wolves (Lauri Hanuska-Brown), Fisheries Survey & Inventory – gillnetting / electrofishing (David Schmetterling), Fisheries Endangered Species (Don Skaar), Commission Minutes Administration (Reg Peterson).

ITO 1-3 Identify areas that include a community of interest and explore ways to leverage shared efficiencies and supportability.

Business requirements or business problem driving this objective:

FWP has legitimate business needs to leverage certain data held in other agency databases. An example of this includes employee data housed in the SABHRS database. FWP programs currently create manual and/or redundant lists of employees to use for a myriad of purposes. Staff should be able to readily access data already housed in SABHRS to create and manipulate these types of lists. FWP also uses SABHRS financial data to feed its Budget Allocation System (BAS). Processes to extract that data and import it into FWP databases are not as effective as other viable technical options. Opportunities should be created to allow more efficient access to FWP agency or staff data housed in other state databases. Another example includes FWP Enforcement staff having multiple relationships with other Law enforcement agencies where cooperative efforts can provide more effective enforcement efforts statewide.

Benefits of meeting this objective:

- Duplicated data is minimized
- Business efforts are coordinated more effectively across the enterprise

Risks associated with this objective are:

- Lack of cooperation
- Failure to meet this objective would result in continued duplication of data across agencies and less than effective services provided to the citizens of Montana.

The timeframe for completion of this objective is:

- Opportunities identified and brought into COI for discussion and documentation for action during FY10

Critical success factors and measures will include:

- Mutual cooperation between COI leads to tangible results
- Minimal to no instances of unnecessarily duplicated data

Update: In April 2011, members of the application development wildlife team met with IT staff and state veterinarians in the FWP Bozeman Lab and the Department of Livestock Lab to begin discussions on an automated interface between the two systems. Plans include automation on both sides to increase efficiencies and reduce potential errors typically caused through manual data entry efforts. Work on that effort is expected to begin in late summer or early fall of 2011.

Additionally, FWP and DPHHS entered into an agreement in the fall of 2010 that resulted in the information sharing from the death registry into ALS. A monthly process was set up to match deceased person records against ALS and flag appropriate matches.

Update: FWP recently signed a MOA with the Department of Justice to cooperatively share SmartCop technology. That project is also specifically described later.

Goal Number 2:

ITG 2 Provide effective technology services

Description: Timely and effective application development and support, and technology delivery to customers. Special emphasis is to be placed on “customer service”.

Benefits:

- Increased system efficiency
- Decision support services delivered
- Reduced administrative overhead
- Satisfied customers
- State-of-the-art technologies are available for FWP staff use
- Lower overall technology related costs

Which state strategic goal(s) and/or objective(s) does your goal address?

This goal will help to more effectively and directly address state strategic goals 1, 2 and 4.

Update: Through incorporation of the Scrum process, the team holds to a two-week development period at the end of which is a Scrum Review process. This process allows the higher value functionality to be built and implemented first. While there is a great deal of “refactoring”, the end result comes far closer to customer expectations. In addition, the customer is intimately involved in deciding what functionality gets built first, next, and last.

Supporting Objective/Action

ITO 2-1 Develop and implement a pilot program providing for the integration and use of the DOJ SmartCop system for FWP Law Enforcement vehicle operations.

Business requirements or business problem driving this objective:

FWP Law Enforcement officers are currently without basic Information Technology resources in the field that have become commonplace in law enforcement around the country and the state. In order to promote officer safety, better service, and more effective protection of the natural resources, benefits would be immediately seen by piloting and deploying this Information Technology system.

Benefits of meeting this objective include:

- Enhance officer safety
- Liability protection for the department and the state
- More efficient dispatching
- Enhanced resource protection

Risks associated with this objective include:

- High costs associated with implementation
- Poor connectivity in large portions of the state will make alternatives essential
- Failure to meet this objective could result in a continued dangerous environment for wardens, and result in poorer coordination across all state law enforcement efforts.

The timeframe for completion of this objective is:

- Development and completion of the pilot program in FY11
- Present finding to FWP management and receive approval for project authority resulting in a decision package for the 2013 Legislature

Critical success factors and measures will include:

- One FWP warden vehicle outfitted just like MHP cars.
- FWP Game Wardens interfacing with SmartCop.
- Projects findings result in recommendations presented to FWP management to move forward with a broader project.

Update: FWP successfully completed a small, limited pilot with two officers using equipment and test software to verify the usability and applicability of the SmartCop program for FWP. At the conclusion of that pilot, FWP Law Enforcement decided to move forward with full participation in this project. A MOA has been established and signed between the two agencies detailing responsibilities and understanding. Equipment and licenses to outfit and install 23 units for FWP Game Wardens have been purchased and will be installed and operational in FY12.

Supporting Objective/Action

ITO 2-2 Develop and implement a public web application that allows the public to search and listen to specific Commission meeting topics.

Change objective for next plan: Develop and implement additional components of the Fish and Wildlife Information System as they are prioritized by System Champions.

Business requirements or business problem driving this objective:

Customers continually request more services that they can access directly rather than via paperwork. Increased direct electronic interaction provides more timely and accurate information as well as reduced costs in the capture of data and information for FWP programs.

Benefits of meeting this objective include:

- Information is directly and more easily accessible to stakeholders
- ~~Reduced staff time preparing Commission meeting materials (audio clips, meeting motions, schedules, agendas) and posting those materials to the web~~
- Customer convenience
- More timely communications
- Consistent information delivery
- **Reduced errors due to inherent problems with paper-based processes**

Risks associated with this objective include:

- Failure to meet this objective could result in dis-satisfied customers.

The timeframe for completion of this objective is:

- This objective should be completed during the second quarter of 2010.

Critical success factors and measures will include:

- Requested system(s) exist to store, manage, and access necessary documents, images, events and services, and are deployed for production use.
- **Goals and objectives stated in the program's business cases are met**

Update: COMPLETED as of August 2010.

Supporting Objective/Action

ITO 2-3 Stay abreast of emerging technologies through research and development in order to best serve FWP stakeholders.

Business requirements or business problem driving this objective:

Technology change is constant. New software versions or releases occur with regularity and require migration paths for existing systems and applications. New and improved products providing better manners of accomplishing results are released regularly as well. Existing technology becomes obsolete or unsupportable requiring update, upgrade or replacement.

Benefits of meeting this objective include:

- FWP stakeholders will have the most effective information technology tools available
- Cost efficiencies

Risks associated with this objective include:

- Desired or appropriate products for FWP that can't gain "enterprise" approval.

The timeframe for completion of this objective is:

- Ongoing as philosophies and technology change.

Critical success factors and measures will include:

- Cost-efficiencies documented as they occur.
- FWP systems continue to evolve to incorporate new and emerging technologies when and where feasible.

Update: FWP Application Development staff have adopted several new technologies this past year that have greatly contributed to our ability to deliver applications with a high degree of usability (ease of use). These include JQuery grids and Java Struts.

Update: FWP Network Services staff continue to explore new methods and technologies to deliver higher quality services more effectively and efficiently. Areas currently being considered for deployment at FWP include virtual desktops and utilizing cloud computing services.

Supporting Objective/Action

ITO 2-4 Provide a cost-effective Technological infrastructure that will facilitate the consolidation of appropriate FWP technology services.

Business requirements or business problem driving this objective:

- A need to provide hardware, software and computer expertise, and maintain controls to ensure that technology is applied appropriately.
- A need to provide consistent agency policy and planning while providing the flexibility for successful implementation of programs across organizational boundaries.

Benefits of meeting this objective include:

- Avoiding costly duplication and fragmentation of data collection and it's storage
- Allows for quality, consistent service delivery
- Provide for an efficient, secure, supportable and recoverable IT environment

Risks associated with this objective include:

- Disagreements about what infrastructure best balances meeting the business needs of program staff with consistent standard platforms that can be efficiently supported.
- Competing projects and priorities.

The timeframe for completion of this objective is:

- Annually as purchase are made
- Ongoing for requested changes and any expanded agency use.

Critical success factors and measures will include:

- Appropriate agency-wide technology infrastructure is identified for consolidation by FY10 end
- Consolidation requirements and schedules are documented within FY11.

Update: FWP has aggressively continued its virtualization efforts to reduce costs and administrative overhead while still providing high quality infrastructure services to its customers. Currently, 90% of implementations eligible for collapse to a virtual infrastructure have been completed. FWP's virtualization efforts are anticipated to be complete in December of 2011.

Goal Number 3:

ITG 3 Stable, secure and recoverable systems

Description: FWP applications and systems remain operational, free from compromise and can be recovered according to operational business requirements.

Benefits:

- FWP business continuity
- Stakeholder confidence
- Sensitive data protected
- Individual privacy safeguarded
- Appropriate and timely information provided to decision makers

Which state strategic goal(s) and/or objective(s) does your goal address?

Stable, secure and recoverable systems are at the very heart of protecting individual privacy and privacy of information. Stability and recoverability leads to improved government services in availability and uptime. Achievement of this goal will help to address state goals 1, 2 and 4.

Update: FWP continues to work on and refine its Disaster Recovery and Business Continuity Plan. These efforts coupled with significant fault tolerance in the FWP infrastructure, ensure that FWP systems continue to enjoy a 97%+ uptime factor. Enhancements to backup technologies (disk vs. tape) have helped ensure recoverability while not impacting production operations.

Supporting Objective/Action

ITO 3-1 Implement Disaster Recovery Scenario Exercises

Business requirements or business problem driving this objective:

In order to ensure that FWP's disaster recovery efforts are appropriately planned and executed, annual exercises involving these plans and protocols are important to quantify timelines and expectations. By going through mock exercises, FWP will be able to effectively evaluate it's DR program

Benefits of meeting this objective include:

- Experience gained by Staff
- Further refinement of timelines and management expectations
- Identification and mitigation of weak areas of the current DR plan
- Enhanced data protection

Risks associated with this objective include:

- Extensive staff time could be consumed, in a time where resources are limited relative to growing workload.
- Reasonably high cost to acquire initial equipment to position the agency to begin such exercises
- Competing projects and priorities.

The timeframe for completion of this objective is:

- Development and completion of the DR program by 2012 calendar year end
- Initial drill conducted for all systems by 2013 fiscal year end.

Critical success factors and measures will include:

- Completion of a mock disaster at least once for each FWP system, with follow-up exercises planned each calendar year.
- FWP management indicates understanding of agency DR needs and capabilities
- Each systems engineer/administrator is certified on the DR of their systems annually

Initial exercises identified and performed as of December 2010. Additional exercises and drills will be developed and conducted over time as FWP's Security and Disaster Recovery Programs move toward maturity.

Supporting Objective/Action

ITO 3-2 Transition the last of FWP's Oracle 6i forms/reports to Oracle 10g

Change objective for next plan: Transition the last of FWP's public-facing MS .net applications to Java Server Pages running within the OpenCMS content management system.

Business requirements or business problem driving this objective:

FWP has converted most of its Oracle forms/reports version 6i to Oracle 10g. Oracle 6i is a unsupported version. It is imperative to keep software versions as up-to-date as possible.

Benefits of meeting this objective include:

- FWP's Oracle user interfaces are all the same version of software, making it easier for staff to support
- **FWP is able to retire its IIS servers**
- **Continued strategic movement away from legacy technologies toward a Java-based code base**

Risks associated with this objective include:

- There are no risks associated with this objective
- **Because of the old version of MS .net code these applications use, there is a risk that some security patch may not work correctly, with the result being a forced shutdown of the IIS server**

The timeframe for completion of this objective is:

- Work is anticipated to be complete by December 2010.
- **Public web applications converted to JSP by the end of December 2011**

Critical success factors and measures will include:

- End-user participation in testing the 10g version to ensure navigation and functionality has not been negatively impacted by the conversion
- **Current functionality is maintained or improved in the JSP rewrite**
- **Reusable Java code is leveraged**

Update: COMPLETED as of November 2010.

ITO 3-3 Transition all applications from the SQL Server database platform over to the Oracle database platform.

Change objective for next plan: Rewrite the online licensing service to use the ALX web service layers.

Business requirements or business problem driving this objective:

FWP has two DBA's who support RDBMS in Oracle, MySQL, and SQL Server. TSB made a business decision several years back to make Oracle its standard RDBMS. It is in FWP's best interests to reduce the number of platforms the DBA's are expected to maintain and support, thereby reducing the necessary training and expertise in all three platforms.

Benefits of meeting this objective include:

- DBA's will be more effective managing fewer database platforms
- Both of FWP's license purchase methods will be using the same set of code, facilitating less work in the set up of licenses and improved support and maintenance capabilities.

Risks associated with this objective include:

- None

The timeframe for completion of this objective is:

- Work will be complete by the third quarter of 2010
- Work will be completed by July 1, 2012

Critical success factors and measures will include:

- No negative impacts due to the application conversions
- SQL Server platform is retired.
- Old ALS API code is retired.
- Online service rewrite leverages the ALX web service layers to provide improved usability in the licensing front-end
- Set up time and associated complexity is decreased

Update: COMPLETED as of December 2010.

ITO 3-4 (New next plan) Upgrade the ALX Java Runtime (JRE) to a newer version.

Business requirements or business problem driving this objective:

It is important to keep software versions as up-to-date as feasible.

Benefits of meeting this objective include:

- Software continues to be supportable

Risks associated with this objective include:

- None

The timeframe for completion of this objective is:

- Work will be complete by the end of October 2011

Critical success factors and measures will include:

- Close coordination in the rollout of the upgraded software to the ALX devices
- Close coordination with SITSD to ensure the JRE upgrade works well on their new WebLogic servers

ITO 3-5 (New next plan) Move to Linux as the Operating System for the ALX devices. Modify printer code so that it works with the Linux OS.

Business requirements or business problem driving this objective:

FWP continues to have difficulties with the Windows operating system on its licensing terminals. In addition to cost, the number of patches and updates make management of these devices difficult. The sheer number of changes to the operating system mandated as “critical” by both the State and Microsoft result in substantial man hours lost to testing and deployment. By moving these terminals to a Linux operating system, FWP hopes to reduce acquisition and support costs over the life of these devices. Additionally, with multiple distributions of the OS available, FWP will avoid “vendor lock-in” and be able to tailor the implementation specifically to the needs of FWP license agents and providers.

Benefits of meeting this objective include:

- This change will allow FWP to use newer printer technologies and keep that hardware contemporary and more easily supported.

Risks associated with this objective include:

- None

The timeframe for completion of this objective is:

- Work will be complete by the end of June 2012

Critical success factors and measures will include:

- Extensive and thorough testing of all ALX code to ensure the OS change and the printer change functions as expected
- Old Windows OS configurations and new Linux OS configurations work simultaneously, with no negative impacts, as the new configuration is rolled out over time
- A documented plan exists detailing the rollout plans for the new device configuration

Goal Number 4:

ITG 4 Workforce recruitment, development, and retention

Description: With effective recruitment, development and retention practices, skilled technology staff are more easily recruited, existing staff have opportunities for additional training, progression within existing positions and career growth, and employee turnover is minimized. As outlined in the Agency’s Goal A, the work environment should have clear priorities, the decision-making process should be efficient and effective; and a result is employees feel a sense of accountability, value and satisfaction in their achievements and their contributions to the agency’s mission.

Benefits:

- Employees can perform challenging and meaningful work
- Opportunities for career growth, learning, and development are maximized
- Employees are recognized, valued, and respected for the contributions they make
- Employees are compensated fairly for the work they do
- Lower employee turnover/increased retention
- Critical business areas have cross-trained support

Which state strategic goal(s) and/or objective(s) does your goal address?

This goal directly addresses state goal 3, although an additional product of this strategic goal is a quality

employee who will further the other three state strategic goals.

Supporting Objective/Action

ITO 4-1 Successfully approach the 2011 legislature in making permanent the positions approved at the 2009 legislative session.

Business requirements or business problem driving this objective:

In 2009, the legislature approved technology fte within FWP. However, as with the majority of FWP's budget, they were categorized as one-time-only (OTO). The needs for the resources have not gone away, and in fact have grown. It is important to retain these positions as permanent to help meet demand for services.

Benefits of meeting this objective include:

- Employee job security
- Enhanced employee morale
- Increased employee loyalty
- Increased productivity
- Reductions in need for more expensive contracted services

Risks associated with this objective include:

- Denial of request by legislative body

The timeframe for completion of this objective is:

- Prepare and submit decision package by required state deadlines.
- Present and hopefully obtain approval at 2011 legislative session

Critical success factors and measures will include:

- Positive approval by legislative body
- No employee's released

Update: Successfully completed within 2011 legislative session - OTO's approved as permanent FTE.

Supporting Objective/Action

ITO 4-2 Make full use of FWP's employee award programs, and identify other creative options to enhance employee morale and retention efforts.

Business requirements or business problem driving this objective:

In the current budget environment, opportunities for employee advancement through pay exceptions or promotions is extremely limited. It is no longer possible to reward employees for exceptional performance through these traditional means. In order to continue to recognize the outstanding efforts of FWP IT staff, the use of the remaining employee award programs, and thinking outside-the-box to identify additional possible options is essential to maintaining a viable, stable workforce.

Benefits of meeting this objective include:

- Enhanced employee morale
- Lowering of the potential turnover rate
- Increased employee loyalty
- Increased productivity

Risks associated with this objective include:

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- Any possible negative perception by other FWP program staff
- Potentially ineffective in the long term as state technology salaries lag far behind private sector positions.

The timeframe for completion of this objective is:

- Identify and present at least two awards per section over the course of FY11. **Update: FWP's Application Development Section presented a SMDC work award August 2010 (recipients Tina Wilson and Becki Kolenberg of MI)**
- Identify and document new options for recognition/appreciation by FY11 end **Update: FWP Technology Services Bureau (TSB) is considering a "TSB Employee of the Quarter (or month)" award. Criteria to include observable and citable agency core competencies during the quarter that earned them the recognition. Exactly what the award would entail is yet unknown.**

Critical success factors and measures will include:

- No employee turnover due to dissatisfaction with technology management
- Each successful project recognized through some type of employee award program.
- Positive feedback received from employees during reviews

Supporting Objective/Action

ITO 4-3 Enhance and improve the flexibility of FWP recruitment processes for technology positions.

Business requirements or business problem driving this objective:

- Effectively use human, physical and fiscal resources. Manage revenue and expenditures with a long-term view.
- Recruit, train, develop, compensate and manage employees each year. Retain a highly qualified and motivated workforce.

Benefits of meeting this objective include:

- Substantial number of applications for a given posting
- Highly qualified applicants
- Better IS workforce
- Minimized re-posting efforts

Risks associated with this objective include:

- Any possible negative perception by other FWP program staff.

The timeframe for completion of this objective is:

- Ongoing review of recruitment processes.

Critical success factors and measures will include:

- Qualified applicants increased by 30%, over previous recruitment
- Vacancy time (not including planned vacancy savings) reduced by 50% per open position, excepting time required to meet vacancy savings requirements
- Fewer positions re-posted
- Increased acceptance of job offers by top candidates
- Competency based pay initiatives are developed and implemented

Update: One thing FWP Application Development tried during the last recruitment was to revise recruitment materials to "market" the agency and the position more so than had been done in the

past. We had a good applicant pool, several of which expressed their interest in the agency because it sounded like a great place to work.

Supporting Objective/Action

ITO 4-4 Develop and maintain a team of FWP IT employees with the knowledge and skills to meet the information services needs of FWP.

Business requirements or business problem driving this objective:

- Effectively use human, physical and fiscal resources. Manage revenue and expenditures with a long-term view
- Recruit, train, develop, compensate and manage employees each year. Retain a highly qualified and motivated workforce

Benefits of meeting this objective include:

- Better service
- Leadership and management advancement opportunities
- Improve employee morale
- Opportunity for skill development
- Improve staff relations
- Continuity of IS service levels

Risks associated with this objective include:

- Expanding customer requests and needs require expanding knowledge. Ultimately this can result in resource issues.

The timeframe for completion of this objective is:

- Position and individual knowledge, skills and career development plans documented by FY11 end.
- Cross training conducted, succession plans documented by FY11 end.
- Ongoing training and development as necessary.

Critical success factors and measures will include:

- Mandatory training requirements implemented with at least one class per year attended
- Skill set deficiencies documented with at least one class made available per year to address deficiencies
- Individual career development action plans exist
- Succession plans exist
- Progression model exists

Update: FWP Technology Services staff continue, for the most part, to be retained with minimal turnover. More time and thought needs to be put into this objective, however, as low state salaries will likely cause staff to “shop around” over upcoming years.

Goal Number 5:

ITG 5 Develop and implement standardized practices and procedures

Description: FWP TSB will develop and implement standardized technology practices and procedures by researching industry accepted “best practices”, and selecting and documenting those standards applicable to FWP technology services.

Benefits:

- Consistent practices and procedures
- Clear decision-making
- Efficient and effective use of IT and other staff resources
- Accountability
- Improved government services
- Positive ROI
- Greater Customer Satisfaction
- Project Risk Mitigation

Which state strategic goal(s) and/or objective(s) does your goal address?

Development and adherence to standard practices and procedures will lead to organized, deliberate and cost effective IT resource development, and ultimately improved and more secure government services. This goal most closely helps to address state goals 2 and 4.

Update: FWP's Web team is now consistently performing code reviews as a matter of practice.

Supporting Objective/Action

ITO 5-1 Codify internal standard operating procedures for systems management

Business requirements or business problem driving this objective:

With the FWP IT environment increasing in size and complexity each year, having documented management protocols and procedures is essential to maintaining a stable, secure environment.

Benefits of meeting this objective include:

- Lower downtime
- Better communications with colleagues and customers
- More efficient maintenance windows
- Enhanced system protection

Risks associated with this objective include:

- Increased staff comp time
- Resistance from team members to standards methods and schedules

The timeframe for completion of this objective is:

- Each FWP system has management document with critical SOP's by 2012

Critical success factors and measures will include:

- Each FWP system has management document with critical SOP's
- Systems engineers/administrators demonstrate competency in all SOP areas during reviews.

Supporting Objective/Action

ITO 5-2 Use appropriate project management methodologies and practices

Business requirements or business problem driving this objective:

As more and more requests for automation occur, the need to use tried and true methodologies becomes ever more important to effectively manage project budgets and resources and to ensure deliverables meet our customer's stated goals, objectives, and expectations.

Benefits of meeting this objective include:

- Clear definition of roles of and communication mechanisms for the involvement of all appropriate stakeholders
- Efficient development practices

- Less re-work
- Additional control over quality of software
- Appropriate control over varying types of development projects through use of adaptive or predictive methodologies

Risks associated with this objective include:

- Identification or choice of standards not used in legacy systems ultimately requiring rewrite or retrofit.

The timeframe for completion of this objective is:

- Ongoing.

Critical success factors and measures will include:

- Projects are completed on time and within budget
- Change requests are effectively managed
- Risks are effectively managed
- Customers are happy with the deliverables

Update: FWP's Application Development staff adopted and implemented the Agile Scrum framework for our development methodology effective Sept 2010. Note: "Less re-work" is not a benefit under the Scrum methodology. One of Scrum's tenants is "refactoring", which means re-work.

FWP's Technology Services Bureau (TSB) has a voting member on the State Project Management Office's Advisory Group (PMOAG).

SECTION 5: IT INITIATIVES (FY2010 – FY 2015)

5.1 IT Initiatives

Initiative 1 - Title: Permanent positions

Description: In 2009, the legislature approved technology positions within FWP. However, as with the majority of FWP's budget, they were categorized as one-time-only (OTO). The needs for the resources have not gone away, and in fact have grown. It is important to retain these positions as permanent to help meet demand for services, and allow achievement the initial objective, which was cost effective reductions in contracted services.

EPP Number (if applicable): UNK

Update – Completed successfully at the 2011 Legislative Session.

Initiative 2 - Title: Video Conferencing Assimilation

Description: FWP recently completed installation of a video conferencing system at it's HQ and regional offices. With budgetary constraints and possibly hazardous travel conditions, video conferencing is a mechanism that can provide travel savings, increase participation at appropriate FWP meetings, and provide safer circumstances for employees or customers with a need to participate in specific FWP meetings. Employees must have confidence in the video system, and it's scheduling and use to most effectively utilize the technology. As a part of this initiative, TSB staff intend to ensure that all links to FWP core facilities are of sufficient size and quality to support agency data and video needs.

EPP Number (if applicable): N/A

Update – Completed March 2011; all circuits upgraded and QOS enabled resulting in a much high quality video experience for FWP users. Use of the video conference system is slowly increasing.

Initiative 3 - Title: Fisheries & Wildlife Information System

Description: FWP's Fish & Wildlife Division has identified the need to centralize the field data (aka survey and inventory data) that is collected by regional biologists, as well as tie together the survey and inventory data to harvest data that is already centralized. This project has been ranked as TSB's top development priority by agency management. This work will be accomplished using existing TSB resources.

EPP Number (if applicable): N/A

Update - Both programs (fish and wildlife) now have working survey and inventory applications in the production environment. Fisheries approach has been a slow roll-out, with an expected hard roll out in the winter of 2012. Fisheries staff have inputted over 37,000 records to-date. Wildlife has also done a restricted, slow roll out for winter elk surveys involving two field biologists. There will be more use by

staff for the summer antelope surveys for 2011. To that end, a “first look” was provided to regional biologists as exposure to the product. A list of enhancements resulted from that meeting most of which have already been completed or are in progress. The wildlife S&I is anticipated to be flexible enough for the input of other big game species without major tweaks. Application Development staff are working with wildlife staff on moose survey data right now to determine what further tweaks are or are not needed.

Initiative 4 - Title: Parks Reservation System

Description: FWP’s Parks Division is working on a cooperative agreement with a neighboring state (ID) for an e-government service to offer online reservations for Park visitors. The model being pursued would provide the system to Montana at no cost to FWP. TSB staff are anticipated to simply be providing support services to ensure Montana’s Parks Division needs are met.

EPP Number (if applicable): N/A

Update - Completed May 2011; an agreement was secured with Idaho state parks. Nineteen (19) state parks in Montana participated in the program this first year. FWP Network Services staff provided acquisition, install, and support services for the infrastructure required.

Initiative 5 - Title: Sequel Server/MySQL Retirement

Description: This initiative will finalize consolidation of FWP RDBMS services onto the Oracle platform. This will reduce costs in hardware, software, and database and systems engineer support.

EPP Number (if applicable): N/A

Update - Completed Dec 2010; an additional move toward consolidation was made through moving a major application (MRRE) from a MySQL database to an Oracle database. Several larger applications continue to reside on the MySQL platform.

Initiative 6 - Title: FWP Server Virtualization

Description: FWP will continue the process of virtualizing server platforms to consolidate hardware and take advantage of underutilized server implementations.

EPP Number (if applicable): N/A

Update - 90% completed. Will be completed December 2011.

SECTION 6: ENTERPRISE ALIGNMENT

6.1 State Strategic Plan for IT Alignment

Please indicate which Communities of Interest your agency plans to be involved in. Agencies are asked to select at least one, but can select as many as needed. Further planning work by the communities of interest will take place following submission of agency IT plans.

- ☒ Government Services
- ☒ Public Safety
- ☒ Human
- ☒ Environmental
- ☒ Education
- ☒ Economic
- ☒ Cultural Affairs
- ☒ Finance

SECTION 7: EXPENDITURES

7.1 Planned Agency IT Expenditures

<u>Expense Category</u>	<u>FY2010</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>
Personal Services	2,072,500	2,072,500	2,072,500	2,072,500	2,124,300	2,124,300
Operating Expenses	2,001,800	2,001,800	2,001,800	2,001,800	2,051,800	2,051,800
Initiatives	0	0	0	0	0	0
Other expenditures	0	0	0	0	0	0
Totals	4,074,300	4,074,300	4,074,300	4,074,300	4,176,100	4,176,100

SECTION 8: ENTERPRISE IT INVENTORY

8.1 Inventory Update

Has the Agency updated their IT Inventory Database as outlined in Section 8 of the instructions? _____

Date that Agency last updated their IT Inventory: _____

SECTION 9: ADDITIONAL INFORMATION - OPTIONAL

Other types of information that support the agency's IT Plan. Some examples might include other COI participation, reference to other IT plans such as GIS plan, eGovernment plan, security plan, staffing issues and constraints, etc.